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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,964

04/12/2007

Taishi Tsuji

46969-5438

9940

23973

7590

12/10/2009

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EXAMINER

HANLEY, BRITT D

ART UNIT

PAPER NUMBER

2889

MAIL DATE

DELIVERY MODE

12/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,964	Applicant(s) TSUJI ET AL.	
	Examiner BRITT D. HANLEY	Art Unit 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/12/2007, 06/20/2007, 02/02/2009, 07/13/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

01 Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

02 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

03 Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

04 Regarding claim 1, the phrase "the organic functional layer includes a pair of first and second layers and a third layer held between the first and second layers" is unclear. The specification and drawings disclose that the function layer can include a HIL, HTL, EL, ETL, and an EIL. Examples disclosed in paragraph 12 include HTL/EL/ETL and HIL/HTL/EL (1/3/2). It appears that there is not actually "a pair of first and second layers", but rather only a first, second and third layer, the third layer positioned between the first and second layer. Examiner interprets the above limitation as "the organic functional layer includes a first and second layer and a third layer held between the first and second layers."

05 Claim 2 recites the limitation "wherein a difference between the glass transition temperature of the third layer and the glass transition temperature of the first or second layer is equal to or more than 12° C." There is insufficient antecedent basis for this limitation in the claim. Claim 1 only claims the T_g of organic materials included in the first, second, and third layers. Claim 1 does not claim the T_g of the first, second, or third layers. The first, second, and third layers could include additional materials other than the claimed organic materials of a certain T_g . Examiner interprets the above limitations as "wherein a difference between the glass transition temperature of the organic compound of the third layer and the glass transition temperature of the organic compound of the first or second layer is equal to or more than 12° C."

Claim Rejections - 35 USC § 102

06 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

07 Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kwong (US 2003/0054197 A1).

08 Regarding claim 1, Kwong discloses an organic electroluminescent device comprising: a pair of positive and negative electrodes opposed to each other (Figure 1, paragraphs 39-40); and an organic functional layer formed between the positive and negative electrodes and having three or more thin films (paragraph 40) including a light emitting layer (NPD) made of an organic compound, characterized in that the organic functional layer includes a first and second layer and a third layer held between the first and second layers (paragraph 40), each of the first and second layers being made of an organic compound a glass transition temperature of which is equal to or higher than a first temperature, the third layer being made of an organic compound a glass transition temperature of which is lower than the first temperature (from Applicant's specification, CuPC Tg=>300°C, NPD Tg=96°C, BAQ Tg=99°C, Alq3 Tg=167°C).

09 Regarding claim 2, Kwong discloses the organic electroluminescent device according to claim 1, wherein a difference between the glass transition temperature of the third layer and the glass transition temperature of the first or second layer is equal to or more than 12°C (|NPD Tg=96°C - CuPC Tg=>300°C| =>12°C & NPD Tg=96°C - Alq3 Tg=167°C | =>12°C).

10 Regarding claim 3, Kwong discloses the organic electroluminescent device according to claim 1 or 2, wherein the first temperature is 107°C (see above).

11 Regarding claim 4, Kwong discloses the organic electroluminescent device according to claim 1, wherein the organic compound included in the third layer shows photoluminescence, and a peak thereof is equal to or less than 500 nm (NPD emits blue light ~420-480 nm).

Art Unit: 2889

Conclusion

1.2 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Britt Hanley whose telephone number is (571) 270-3042. The examiner can normally be reached on Monday - Thursday, 6:30a-5:00p ET.

1.3 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571)272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

1.4 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Britt Hanley/
Examiner, Art Unit 2889

/Toan Ton/
Supervisory Patent Examiner, Art Unit 2889